



天津鹏程慧通商贸有限公司  
TIANJIN HUGE ROC ENTERPRISES CO., LTD.

## Product Description

**Pure PC003** is a high purity premium grade, high capacity, conventional gel polystyrene sulphonate cation exchange resin supplied in the sodium or hydrogen form. It is intended for use in all water softening, dealkalization, deionization and chemical processing.

## Applications

**Pure PC003** in H form (**PC003H**) can be used in multiple and mixed bed demineralizers with strong base anion exchangers such as Pure PA101, PA102 and PA103 in OH form.

**Pure PC003** is well suited for industrial, commercial or residential softening applications because of its high capacity and good physical stability.



Certificated by WQA against NSF/ANSI/CAN 61 & NSF/ANSI 44

## Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Polystyrene crosslinked with DVB
Functional Group	R-(SO <sup>3</sup> )-M <sup>+</sup>
Ionic Form, as shipped	Na <sup>+</sup> / H <sup>+</sup>
Physical Form And Appearance	Clear Spherical Beads
Sphericity	95% min.
Screen Size Range --- U.S. Standard Screen	16-50 mesh, wet
Particle Size Range	+1.2 mm < 5%, -0.3 mm < 1%
Uniformity Coefficient	1.6 max.
Water Retention, Na <sup>+</sup> form	43-48%
H <sup>+</sup> form	47-54%
Swelling Na <sup>+</sup> → H <sup>+</sup>	10% max.
Ca <sup>2+</sup> → Na <sup>+</sup>	5% max.
Shipping Weight, Na <sup>+</sup> form	780-880 g/l (51 lbs/cu.ft, approx.)
H <sup>+</sup> form	770-870 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity, Na <sup>+</sup> form	2.0 eq/l min.
H <sup>+</sup> form	1.9 eq/l min.
pH Range	0-14





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REHN BIOTECH CO.,LTD.

## Suggested Operating Conditions

### Maximum Temperature

Na+ form	120°C (248°F) max.
H+ form	100°C (212°F) max.

### Minimum Bed Depth

0.6 m (24 inches)

### Backwash Expansion

25-50% Bed Expansion

### Regeneration

Hydrogen Cycle	10% HCl or 1-8% H <sub>2</sub> SO <sub>4</sub>
Sodium Cycle	10-15% NaCl
Flow Rate	2 to 7 BV/h (0.25 to 0.90 gpm/cu.ft)
Contact Time	At least 30 Minutes

### Displacement Rinse Rate

Same as Regenerant Flow Rate

### Displacement Rinse Volume

10-15 gallons/cu.ft

### Fast Rinse Rate

8-40 BV/h (1.0-5.0 gpm/cu.ft)

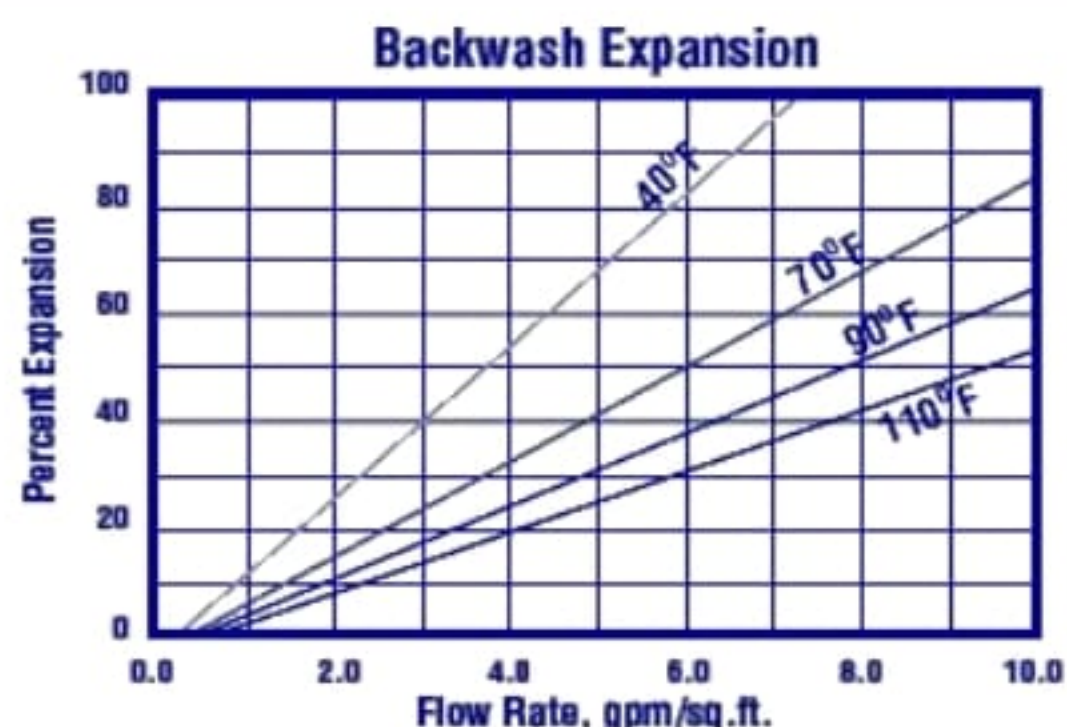
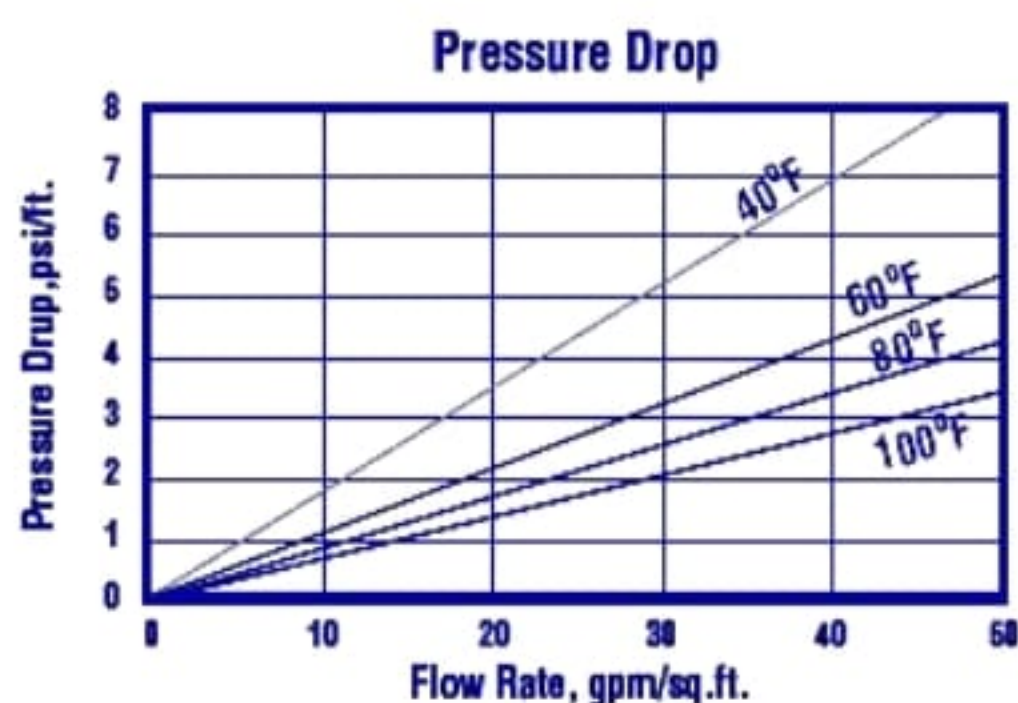
### Fast Rinse Volume

3-10 BV (24-45 gal/ft<sup>3</sup>)

### Service Flow Rate

8-40 BV/h (1.0-5.0 gpm/cu.ft)

## Hydraulic Properties



**Pressure Drop:** The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various temperatures.

**Backwash:** After each cycle the resin bed should be backwashed at a rate that expands the bed 25 to 50 percent. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of **PC003** in Na form.